TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
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PRODUCT EVALUATION Effective Date: September 1, 2012
DR-553 Reevaluation Date: **September 2016**

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code and the Texas Engineering Practice Act.

Model DL416 Flush and Louvered Outswing Hinged Single or Double Steel Doors, Impact Resistant, manufactured by

Republic Doors and Frames
155 Republic Drive
McKenzie, Tennessee 38201
Telephone: (800) 733-3667

General Description:

System	Description	Design Pressure Rating
1	Model DL416 Flush Outswing Hinged Double Steel Doors; XX	± 65 psf
2	Model DL416 Flush Outswing Hinged Double Steel Doors; XX	± 70 psf
3	Model DL416 Louvered Outswing Hinged Single or Double Steel Doors; X or XX	± 60 psf

Product Dimensions:

System	Overall Frame Size	Panel Size	Louver Opening Size
1	100” x 98”	Two: 48” x 96”	N/A
2	100” x 98”	Two: 48” x 96”	N/A
3	100” x 98”	Two: 48” x 96”	24” x 64”

Hardware:

Hinges: Each door has four (4) PBB 4 ½ ” x 4 ½ ” mortise butt-type hinges. The hinges are secured to the door frames with four (4) ½ ” x 10-24 MS screws. The hinges are secured to the door panels with four (4) ½ ” x 10-24 MS screws.

Lock Options (Active Door Panel):

- Dorma CL753D cylindrical lock (Systems 1, 2, 3)
- Dorma CL753D cylindrical lock with Dorma DB650D deadbolt (Systems 1, 2, 3)
- Dorma ML 9953D mortise lock (Systems 1, 2, 3)
- HCF 9400 surface vertical rod (System 3 only)
- Dorma Rim Exit Devices 9700/F9700 (Systems 1 and 3 only)

Hardware (continued):

Lock Options (Inactive Door Panel):

- Rockwood 585 surface bolts (Systems 1, 2, 3); Secured to the door with four (4) 10 x 1 ¼" SMS
- Dorma Rim Exit Devices 9700/F9700 (Systems 1 and 3 only)

Strike Plates:

- Strikes for surface bolts; secured with two (2) 10 x 1 ¼" SMS
- Strike plates on the door frame; secured with two (2) 1" x 12-24 MS per strike plate
- Strike plates on the astragals; secured with 1" x 12-24 STMS screws (10 screws for 7'0" door height, 12 screws for 8'0" door height)

Threshold: National Guard Products 803V

Product Identification:

System		
1 and 2	Certification Agency	N/A
	Manufacturer's Name or Code Name	Republic Doors and Frames
	Product Name	Flush Pairs
	Test Standards	ASTM E 330; ASTM E 1886; ASTM E 1996

System		
3	Certification Agency	N/A
	Manufacturer's Name or Code Name	Republic Doors and Frames
	Product Name	Louver Singles or Pairs
	Test Standards	ASTM E 330; ASTM E 1886; ASTM E 1996

Impact Resistance:

Impact Resistant	Requirement
Yes	These products satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I** and **Seaward zone**. The assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded.

Installation:

System 1: The wall framing shall be minimum Southern Yellow Pine dimension lumber or minimum 1,500 psi grout-filled concrete block. The door frame side jambs are secured to the wall framing with minimum ⅜" x 5" long lag bolts. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into wood substrates and minimum 2 ⅜ inches into concrete block substrates. A minimum of four (4) anchors are required along each side jamb, spaced 6 inches, 34 inches, 67 inches and 92 inches from the sill. The threshold is secured to the foundation or floor framing with minimum No. 10 screws. The fasteners are located in pre-drilled holes spaced 6 inches from each end and 12 inches on center. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the foundation or floor framing.

Systems 2 and 3: The wall framing shall be minimum 1,500 psi grout-filled concrete block. The door frame side jambs are secured to the wall framing with minimum ⅜16" x 8 ¾" masonry wire anchors and with ⅜" x 5" long lag bolts . A minimum of four (4) wire anchors and four (4) bolts are required along each side jamb, at each hinge location. The threshold is secured to the foundation or floor framing with minimum No. 10 screws. The fasteners are located in pre-drilled holes spaced 6 inches

from each end and 12 inches on center. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the foundation or floor framing.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.